

Appl. No. 09/437,590
Amdt. Dated 09/03/2004
Reply to Office Action of June 3, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-76. (Cancelled).

Claim ~~77~~¹. (Previously Presented) A copy management method for controlling storage and reproduction of digital content comprising:

receiving a digital bitstream including program data, the program data including system information and the digital content in a scrambled format;

descrambling the digital content in the scrambled format to provide a first output including the digital content in a descrambled format;

concurrently outputting the first output including the digital content in the descrambled format for display and a second output including the digital content in the scrambled format along with at least one access requirement for storage;

retrieving the stored digital content and the stored access requirement; and

descrambling the stored digital content using the stored access requirement.

Claim ~~78~~². (Previously Presented) A copy management method for controlling storage and reproduction of digital content comprising:

receiving a digital bitstream including program data, the program data including system information and the digital content in a scrambled format;

descrambling the digital content in the scrambled format to provide a first output including the digital content in a descrambled format;

encoding a second output with at least one copy management command; and

concurrently outputting the first output including the digital content in the descrambled format for display and the second output including the digital content in the scrambled format for storage.

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Claim 79. (Previously Presented) The copy management method of claim 78, wherein the at least one copy management command indicates that program data forming the second output is "copy free".

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Claim 80. (Previously Presented) The copy management method of claim 78, wherein the receiving of the digital bitstream comprising:
tuning a tuner to a frequency to receive the digital bitstream;
demodulating the digital bitstream; and
routing the program data of the digital bitstream to a conditional access unit upon determination that the program data includes the digital content in the scrambled format.

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Claim 81. (Previously Presented). The copy management method of claim 78, wherein the outputting of the first output and the second output is performed simultaneously.

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Claim 82. (Previously Presented) The copy management method of claim 78, wherein the digital content is content in a digital television transmission.

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Claim 83. (Previously Presented) The copy management method of claim 78, wherein the receiving of the digital bitstream comprising:
tuning a tuner to a frequency to receive the digital bitstream;
demodulating the digital bitstream; and
routing the program data of the digital bitstream to a conditional access unit upon determination that the program data includes the digital content in the scrambled format.

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Claim 84. (Previously Presented) A copy management method for controlling storage and reproduction of digital content comprising:
receiving a digital bitstream including program data, the program data including system information and the digital content in a scrambled format;
descrambling the digital content in the scrambled format to provide a first output including the digital content in a descrambled format, comprising

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recovering a packet identifier (PID) from the program data, the PID indicating where an entitlement control message (ECM) may be found in the program data, and transmitting the PID to a conditional access unit;

receiving a digital bitstream including program data including system information and the digital content in a scrambled format, the receiving of the digital bitstream comprises

tuning a tuner to a frequency to receive the digital bitstream,

demodulating the digital bitstream, and

routing the program data of the digital bitstream to the conditional access unit upon determination that the program data includes the digital content in the scrambled format;

descrambling the digital content in the scrambled format to provide a first output including the digital content in a descrambled format; and

concurrently outputting the first output including the digital content in the ~~descrambled format~~ descrambled format for display and a second output including the digital content in the scrambled format for storage.

Claim ⁹85. (Previously Presented) The copy management method of claim ⁸84, wherein the recovering of the PID is performed by a demultiplexer unit in communication with a central processing unit (CPU) that transmits the PID to the conditional access unit.

Claim ¹⁰86. (Previously Presented) A copy management method for controlling storage and reproduction of digital content comprising:

receiving a digital bitstream including program data, the program data including system information and the digital content in a scrambled format

descrambling of the digital content in the scrambled format comprising:

extracting an entitlement control message (ECM) from the program data, the ECM being used to derive a key for descrambling the digital content in the scrambled format; and

transmitting the ECM to a conditional access unit;

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receiving a digital bitstream including program data including system information and the digital content in a scrambled format, the receiving of the digital bitstream comprises

tuning a tuner to a frequency to receive the digital bitstream,

demodulating the digital bitstream, and

routing the program data of the digital bitstream to the conditional access unit upon determination that the program data includes the digital content in the scrambled format;

descrambling the digital content in the scrambled format to provide a first output including the digital content in a descrambled format; and

concurrently outputting the first output including the digital content in the descrambled format for display and a second output including the digital content in the scrambled format for storage.

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Claim ~~87~~. (Previously Presented) A copy management apparatus for controlling the recording and reproduction of digital content comprising:

a tuner to receive a digital bitstream including scrambled program data, the scrambled program data including the digital content in a scrambled format;

a processor to select a frequency for the tuner for receiving the digital bitstream and to transmit a packet identifier (PID); and

a conditional access unit to receive the PID from the processor, the PID identifying where an entitlement control message (ECM) is located in the program data and to derive a key using the PID for descrambling the digital content of the scrambled program data.

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Claim ~~88~~. (Previously Presented) The copy management apparatus of claim ~~87~~ further comprising:

a demodulator unit in communications with the tuner and the conditional access unit, the demodulator unit to demodulate the digital bitstream and to transmit the scrambled program data to the conditional access unit if the scrambled program data includes the digital content in the scrambled format.


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¹³ Claim ~~89~~. (Previously Presented) The copy management apparatus of claim ~~88~~¹² further comprising:

a demultiplexer unit in communications with the demodulator unit, the processor and the conditional access unit, the demultiplexer unit to receive the program data from one of the demodulator unit and the conditional access unit, to parse the program data for one or more packet identifiers (PIDs), and to transfer the PID of the one or more PIDs to the processor.

¹⁴ Claim ~~90~~. (Previously Presented) The copy management apparatus of claim ~~89~~¹³ further comprising:

a digital interface unit in communications with the conditional access unit, the digital interface unit to encode the program data for storage.

 ¹⁵ Claim ~~91~~. (Previously Presented) The copy management apparatus of claim ~~87~~¹¹ further comprising:

a digital interface unit in communications with the conditional access unit, the digital interface unit to encode the program data for storage.

¹⁶ Claim ~~92~~. (Previously Presented) The copy management apparatus of claim ~~90~~¹⁴, wherein the tuner, the demodulator unit, the processor, the demultiplexer unit, and the digital interface unit reside in a single housing.

¹⁷ Claim ~~93~~. (Previously Presented) The copy management apparatus of claim ~~90~~¹⁴, wherein the conditional access unit is an external NRSS conditional access module adapted to the single housing.

¹⁸ Claim ~~94~~. (Previously Presented) The copy management apparatus of claim ~~90~~¹⁴, wherein the conditional access unit is a Personal Computer Memory Card International Association (PCMCIA) card adapted to the single housing.

¹⁹ Claim ~~95~~. (Previously Presented) The copy management apparatus of claim ~~90~~¹⁴, wherein the conditional access unit is a smart card adapted to the single housing.

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Claim 96. (Cancelled).

²¹ Claim ²⁰97. (Previously Presented) The copy management apparatus of claim ²⁰102,
wherein the storage means being an audio player/recorder.

²² Claim ²⁰98. (Previously Presented) The copy management apparatus of claim ²⁰102,
wherein the storage means being an digital video cassette recorder (VCR).

²³ Claim ²⁰99. (Previously Presented) The copy management apparatus of claim ²⁰102,
wherein the storage means being a hard disk recording unit.

²⁴ Claim ²⁰100. (Previously Presented) The copy management apparatus of claim ²⁰102,
wherein the means for recovering the control information includes recovering a packet identifier
(PID) from the program data, the PID identifying where an entitlement control message (ECM)
is located in the program data and to derive a key using the PID for descrambling the digital
content in the first scrambled format.

Claim 101. (Cancelled).

²⁵ Claim ²⁰102. (Previously Presented) A copy management apparatus for controlling
recording and reproduction of digital content comprising:

means for receiving a digital bitstream including program data in a scrambled format, the
program data comprises the digital content in a first scrambled format;

means for recovering control information from the program data;

means for demodulating the digital bitstream and to transmit the program data in the first
scrambled format if the program data includes the digital content in the first scrambled format;

means for descrambling the digital content in the first scrambled format upon receipt
from the means for demodulating based on the control information for display and concurrently
re-scrambling the digital content in a second scrambled format; and

means for encoding the program data that comprises the digital content in the second
scrambled format prior to storage.